

Municipal Broadband

City of Newark Research Project

Overview of Research

And a thank you...

Experts

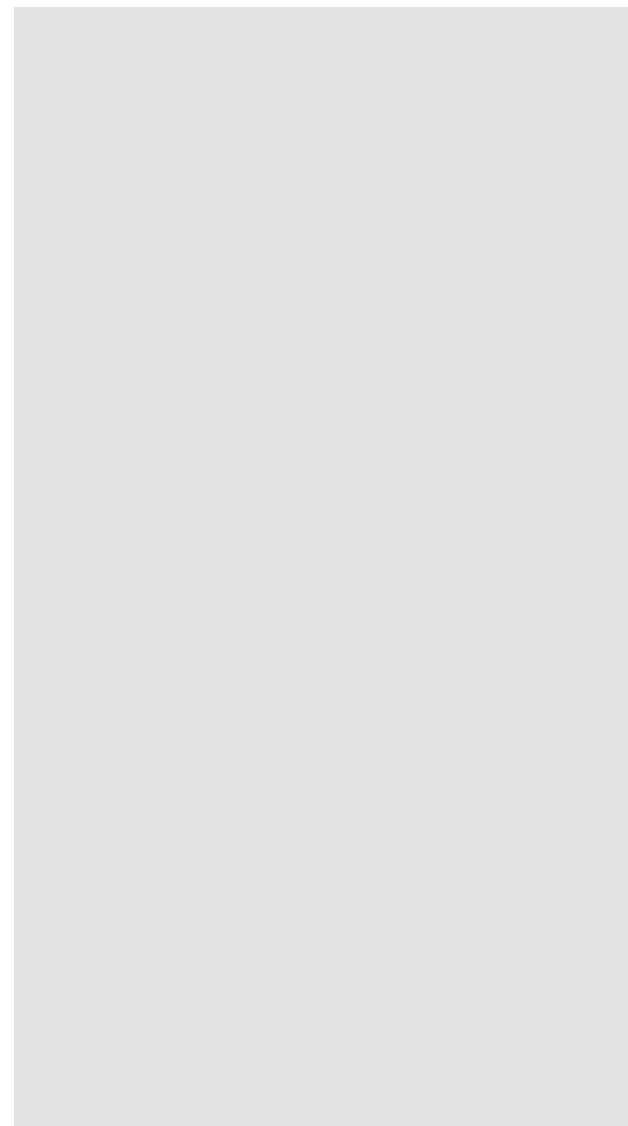
- Global City Teams Challenge, Washington DC
- US Ignite (Experts in Municipal Broadband)
- FiberTech – Sussex County
- Gig-U
- Next Century Cities (NCC)
 - Deb Socia, Executive Director
 - Christopher Mitchell, Institute for Local Self-Reliance (ILSR)
 - Director of Community Broadband Networks Initiative
 - Top 25 in Public Sector Technology by Government Technology
 - Operates MuniNetworks.org
- Mr. Blair S. Levin, formerly with the Federal Communications Commission
 - Chief of Staff to FCC Chairman Reed Hudt from 1993-1997
 - Served as Executive Director of the National Broadband Plan from 2009-2010
- Dan Grim, CTO University of DE
 - What is the benefit to the University?

Current Infrastructure

- Comcast Small-Business WAN
- Shared Internet with University of Delaware
- Wireless Metro Mesh used for Smart Meters
- Dark Fiber along Delaware Ave.
 - PEG (formerly Gore)
- Current Staffing and Expertise

Wi-Fi vs Fiber

- Wi-Fi vs Fiber-To-The-Premises (FTTP)
 - Convenience
 - Performance
 - Longevity
 - Building penetration
- Wireless Mesh
 - Loss of performance with each jump
- Wireless Point-To-Point
 - Point to Multi-Point



Projects (1 of 4)

Chattanooga, TN “The Gig City”

- 1 GB (\$70/mo), 100 MB (\$58/mo) *2014
- 57,540 Households, 5,000 Businesses
- \$111 million stimulus grant from Department of Energy in 2008
- “Triple Play Bundle” for Video, Phone and Internet is available
- Speed comparison to Newark
 - Avg: (35.8 Mbps vs 16.1 Mbps)
*testmy.net
- Cautionary Tale: Total cost is estimated at \$550 million, and business may not have developed as expected

Connecticut Municipal Fiber “CT Gig”

- CET – Connecticut Commission on Education Technology
- 46 Counties, 50% of State of Connecticut’s population
- \$93 million Recovery Act investment from National Telecommunications and Information Administration
- 100 Mbps service is planned

Projects (2 of 4)

Massachusetts “Fiber Towns”

- 22 rural towns included
 - (32 required to pass vote)
- Currently no high-speed internet is available in this geographical area
- Required: 40% of households must make conditional commitment for service and a \$49 deposit
- Estimated cost \$79 million
- 25 Mbps for “Basic Service” @ \$49/mo.

Tempe, AZ

- 2006, issued RFP for municipal Wi-Fi network
- 113 Potential Vendors, 4 bidders
- MobilePro won bid, but could not deliver on its promise
- 1 Mbps in 2006
- No longer in service

Projects (4 of 4)

Minneapolis, MN

- 10 year contract with USI Wireless
- 59 square miles
- 6 Mbps \$36/month
- Install and activation \$150

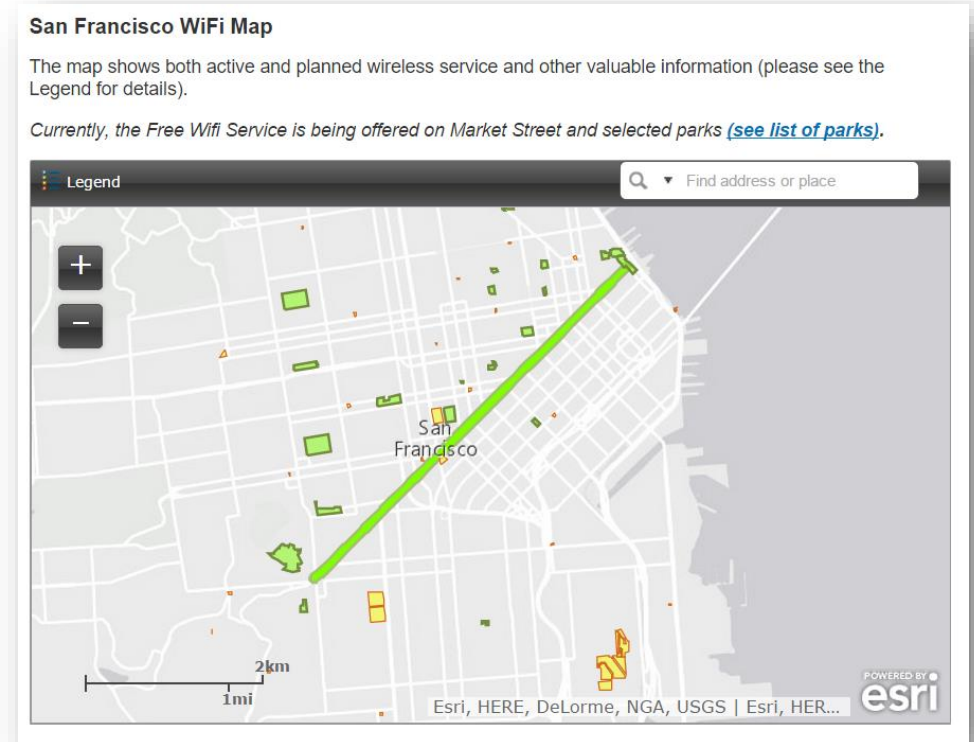
Sandy, OR “SandyNet”

- Fiber
- Average available bandwidth 5 Mbps
- 100 Mbps \$60/month
- 12 Years to deploy
- Started per neighborhood

Projects (4 of 4)

San Francisco Public Wi-Fi

- Focused mostly on public parks, plazas and open spaces
- Free service to visitors of these areas
- Start small, and grow



**TOUGH
DECISIONS
AHEAD**

Pros and Cons

Positive Potential

- Notoriety as being a progressive city
- Improved internet performance for residents
- Revenue generator for City (advertising)
- Provide low-to-no cost service to low income communities
- Educational opportunities
- Free Wi-Fi for visitors and guests
- Government vehicle/device use
- Alternative to the status quo of Duopoly

Negative Concerns

- Competition in marketplace
 - 98.9% of current residents have broadband accessibility
 - 16 competitors
- Up-front costs to implement
- Ongoing maintenance costs
 - Full system replacement every 5-7 years
- Expense to provide technical and customer services
- Costs to residents

Competition

Comcast Xfinity

- 25 Mbps - \$67/mo.
- 100 Mbps - \$79/mo.
- 150 Mbps - \$90/mo.

**first 12 month pricing*

Verizon FIOS

- 25 Mbps - \$44/mo.
- 75 Mbps - \$75/mo.
- 150 Mbps - \$125/mo.

**off contract pricing*

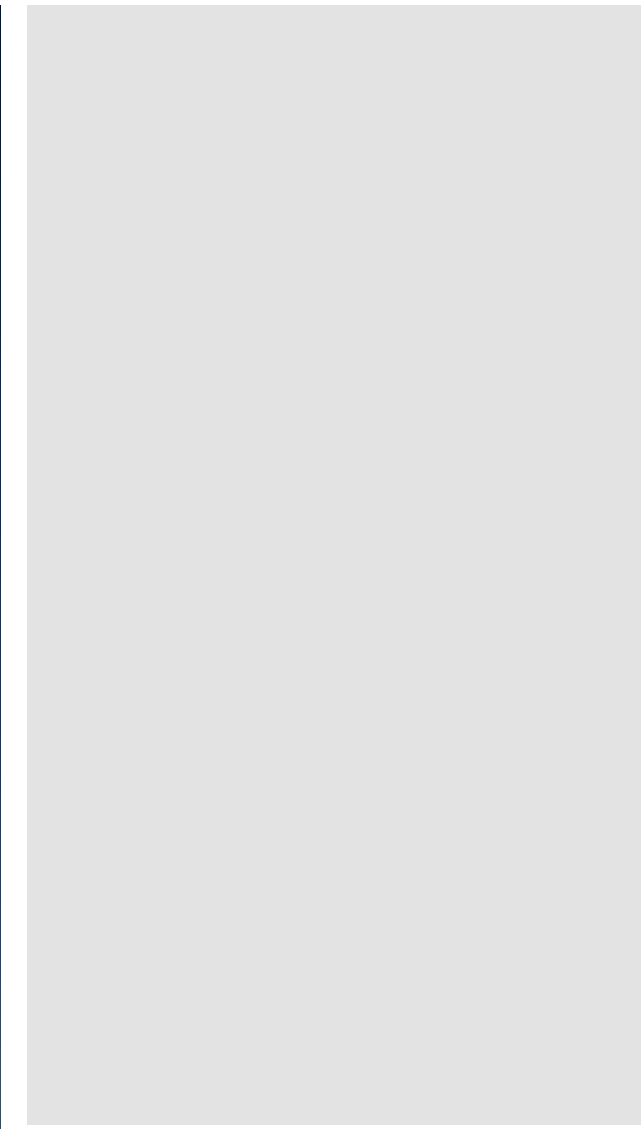
Chattanooga

- 100 Mbps - \$58/mo.
- 1 Gbps - \$70/mo.

Massachusetts

- 25 Mbps - \$49/mo.

All prices are for non-bundled services



CCI Initiatives

Chesapeake Crescent Initiative

- Deployment of (up to) 10 Smart Advertising Kiosks along Main Street
- Touch-screen pedestal devices with real information such as restaurant menus, activity and event information
- Would tie directly to fiber to allow for advertising based revenue when not in use by visitors
- Would provide free localized Wi-Fi along Main Street
- Full presentation at a later time

Informational Workshop

- Workshop to discuss level of interest in a future feasibility study
- Evaluate interest in and the need for broadband by Newark Residents
- Review perceived project strengths and weakness from the City's perspective
- Review existing City infrastructure
- Assess synergies with other initiatives in the City
- Explore likely network models
 - (e.g., free public access, paid public access, public safety access)
- Identify all project requirements
- Evaluate potential funding and financing sources
- Discuss lifecycle of network technologies

Assistance

CTC Technology & Energy (CTC)

- Qualifications:
 - Recommended by Gig-U
 - Seattle, WA Municipal Broadband Feasibility
 - City of Huntsville, AL
 - Works with Netflix, Google, National Association of Telecommunications Officers and Advisors (NATOA)
 - <http://www.ctcnet.us/>

Result of workshop should be decision on whether or not to move forward on feasibility study



Shall we move forward?